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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DANIEL BATES and JORGE GEAGA

Appeal 2008-2687
Application 09/679,391
Technology Center 2600

Decided:[1] March 27, 2009

Before KENNETH W. HAIRSTON, ROBERT E. NAPPI, AND JOHN A. JEFFERY, *Administrative Patent Judges*.

HAIRSTON, *Administrative Patent Judge*.

DECISION ON APPEAL

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[1] The two-month time period for response or filing an appeal or commencing a civil action, as recited in 37 CFR § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 31 to 38. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

Appellants' invention relates to a method and apparatus for automatically identifying a location in a video frame, determining a color value of the location, and associating an event with the color value (Spec. 14 and 15, Fig. 1). Claims 31 and 37 follow and represent the subject matter claimed on appeal:

> 31. A method for automatically identifying an object in a plurality of video frames and associating the object with an event comprising:
>
> determining a location in one of said video frames where an action by a pointing device has occurred defining a selected location;
>
> determining a color value of said selected location; and
>
> automatically associating an event with said color value of said selected location in said one video frame and automatically associating events with said color value in succeeding video frames.
>
> 37. A method for automatically identifying an object in a plurality of video frames and associating the object with an event comprising:
>
> determining the coordinates along one edge of an object in one of said video frames selected by a pointing device defining a selected object;
>
> determining the color values along said edge of said selected object; and

automatically associating an event with said color values along said edge in said one video frame and automatically associating events with said color values in succeeding video frames associated with the color values.

REJECTIONS

The Examiner relies on the following prior art references to show unpatentability:

Rangan	US 6,198,833 B1	Mar. 6, 2001
Isadore-Barreca	US 6,205,231 B1	Mar. 20, 2001

The Examiner rejects the claims as follows:

1. Claims 31 to 36 are rejected under 35 U.S.C. § 102(b)[2] as being anticipated by Rangan.
2. Claims 37 and 38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rangan and Isadore-Barreca.

Rather than repeat the arguments of Appellants or the Examiner, we refer to the Appeal Brief filed on October 11, 2006, the Examiner's Answer mailed on October 27, 2006, and the Reply Brief filed on September 28, 2006 for their respective details. Appellants argue two groups of claims. Appellants collectively argue claims 31 to 36 and state that these claims

[2] Although the Examiner indicated that these claims were rejected under § 102(b) in the Answer (Ans. 3), the Examiner nonetheless indicates that the claims were rejected under § 102(e) in the Final Rejection. *Compare* Ans. 3 *with* Fin. Rej. 4. In any event, Rangan qualifies as prior art under § 102(e). Nevertheless, we deem this error in the Answer harmless as it does not affect our decision regarding the merits of the anticipation rejection.

stand or fall together (App. Br. 7).[3] Similarly, Appellants collectively argue claims 37 and 38 (App. Br. 9 and 10; Reply Br. 3 to 5). Arguments which Appellants could have made but did not make in their Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 1.37(c) (1) (vii). Claims 31 and 37, which are set forth above, represent the invention claimed on appeal. Claims 32 to 36 stand or fall with claim 31. Claim 38 stands or falls with claim 37.

ISSUES

The Examiner identifies where all limitations in claims 31 to 36 on appeal are taught by Rangan. The Examiner also identifies where all limitations in claims 37 and 38 on appeal are taught by Rangan and Isadore-Barreca. The Examiner provides reasons for one of ordinary skill in the art to combine the teachings of Rangan and Isadore-Barreca. Appellants argue that Rangan and/or Isadore-Barreca do not teach the limitations in the claims on appeal. Appellants also argue that there is no motivation to combine the teachings of Rangan and/or Isadore-Barreca.

From the above contentions, we frame the issues on appeal as follows:

1. Have Appellants shown that the Examiner erred by not establishing that all limitations in claims 31 to 36 on appeal are shown in Rangan within the meaning of 35 U.S.C. § 102?
2. Have Appellants shown that the Examiner erred by not establishing that all limitations in claims 37 and 38 on appeal

[3] The Briefs were filed in the USPTO by facsimile. The copy of the Briefs in the USPTO record only display page numbers inserted during the facsimile transmission. We use the page numbers at the bottom left of the pages for our references.

are shown within the combined teaching of Rangan and Isadore-Barreca within the meaning of 35 U.S.C. § 103(a)?

3. Have Appellants shown that the Examiner erred by not providing a sufficient reason to combine the teachings of Rangan and Isadore-Barreca within the meaning of 35 U.S.C. § 103(a)?

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

1. Appellants state that the invention claimed on appeal determines an item of interest in an initial frame, and then automatically locates the selected item in the remaining frames, and these items are then tagged and linked to an event, such as a URL (App. Br. 6 and 7).
2. Appellants admit that Rangan tracks an area (e.g., a rectangular wire frame) "having a fixed size around the location where the pointing device was exercised by comparing the color of individual pixels in the fixed wire frame from one frame to the next" (App. Br. 8).
3. Rangan teaches a graphical user interface (GUI) usable by an editor for selecting and centering a tracking element on a moving entity to be tracked in a first frame of video, and for initiating a tracking process (col. 3, ll. 29 to 64). The tracking element 29 is

placed over an image to be tracked and activated by a mouse click or other command action (col. 7, ll. 34 to 52).

4. Rangan discloses a step of determining a color value with a selected location and automatically associating an event. For example, "the color (e.g. RGB) values of each target pixel are used as a base comparison signature for tracking element 29 during frame by frame motion (internal frame rate)" (col. 7, ll. 35 to 52).
5. Rangan also discloses initiation of "tracking of any image entity or entities in a video stream, after which initiation tracking may be automatic" (col. 4, l. 66 to col. 5, l. 19). An image entity is "any person or thing depicted in a video display, such as a player in a sports game, and actor in a play, a car in a car race, and so on" (col. 5, ll. 8 to 10).
6. Rangan teaches automatically associating an event with the color value of the selected location in one video frame and automatically associating events with the color value in succeeding video frames (col. 4, ll. 20 to 32).
7. Rangan provides an example of an initiating event in which tracking element 29 is placed over an image entity (i.e., a swim suit[4] worn by a swimmer) in an initial frame to be tracked, and a mouse click or some other action starts the tracking process (col. 7, ll. 34 to 38). The color values (i.e., RGB) for target pixels in

[4] In Appellants' disclosure, the initiating event is a moving green shirt worn by a game show host (Spec. 15). The selecting and tracking of the green shirt in Appellants' disclosure is equated to the selecting and tracking of the swimsuit worn by the swimmer in Rangan.

the initially tracked image are stored in a table, and are used as a base comparison signature for subsequent frames tracked by tracking element 29 (col. 7, ll. 38 to 52; col. 8, ll. 34 to 55; col. 9, ll. 12 to 40; col. 10, ll. 43 to 46).

8. Isadore-Barreca, like Rangan, is concerned with the processing of moving video images and more particularly to tracking moving entities in a video presentation (col. 4, l. 66 to col. 5, l. 6) (F. Rej. 9 to 13). Further, Isadore-Barreca identifies and traces an object within a video image (col. 5, ll. 44 to 62).

9. In Isadore-Barreca, an object 20 is depicted upon a background 22. The background 22 may include nondescript and generally undefinable portions and other items 24, which other items 24 are potentially definable portions of the background 22. These other items can be separately defined as additional objects of interest (Fig. 2, col. 5, ll. 36 to 44). Isadore-Barreca indicates that methods for identifying, deleting, or moving the object 20, or changing its color within the video image 14 are known in the art (col. 5, ll. 45 to 49). According to Isadore-Barreca, a well-known and widely practiced edge detection technique is known "as Sobel's Algorithm (discussed in detail in *Digital Image Processing* by Gonzolez and Woods, Addison-Wesley Publishing, 1992, pp. 197-201 and 416-420)" can be used to detect an edge 26 of the object 20 (col. 5, ll. 49 to 55). The edge 26 is a boundary between two regions of an image (the two regions being the object 20 and the background 22) "which two regions have relatively distinct luminosity characteristics, although it is certainly conceivable that

> the edge 26 [can] be defined according to color characteristics, or the like, in addition to or instead of by the luminosity characteristics" (col. 5, ll. 55 to 62).

PRINCIPLES OF LAW

Claim Interpretation

The transitional term "comprising" is inclusive or "open-ended and does not exclude additional, unrecited elements," *Mars, Inc. v. H.J. Heinz Co.*, 377 F.3d 1369, 1376 (Fed. Cir. 2004) (citations omitted).

Anticipation

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

Obviousness

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S. Ct. 1727, 1734 (2007).

The Court emphasized the need to account for common sense when considering whether a combination of references would have been obvious: "[c]ommon sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like the pieces of a puzzle." *KSR*, 127 S. Ct. at 1742. The Court further explained that "[a]lthough common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *KSR*, 127 S. Ct. at 1741.

ANALYSIS

Anticipation

We are not persuaded by Appellants' arguments of Examiner error. Appellants argue that Rangan does not teach the step recited in claim 31 calling for "determining a location in one or more of said video frames where an action by a pointing device has occurred" (App. Br. 7). However, we agree with the Examiner's finding (Ans. 3) that Rangan teaches the use of a graphical user interface (GUI) for determining a location in a video frame, such as for electing, centering, and initiating a tracking element (FF 3 and 7). Appellants then argue that Rangan does not teach "determining the color value..." step in claim 31 (App. Br. 7). We disagree. As indicated *supra*, Rangan discloses a step of determining a color value of a selected location (FF 3 to 7). Rangan further discloses initiation of tracking of any image

entity or entities in a video stream, after which initiation tracking may be automatic (FF 5). An image entity can be any person or thing depicted in a video display, such as a player in a sports game, and actor in a play, a car in a car race, etc. (FF 5).

Contrary to Appellants' arguments (App. Br. 7 and 8), Rangan also discloses the last step in claim 31 on appeal, namely, "automatically associating an event" (i.e., movement of the swimmer and the swim trunks) with the color value of the selected location in the one video frame and automatically associating events with the color value in succeeding video frames (FF 6 and 7).

Appellants' other arguments are directed to limitations not in the claims on appeal. We summarize these arguments below where limitations not in the claims on appeal are set forth in italics:

1. Rangan does not *define an object based on its color*, *does not dynamically track the object based on color*, and *does not change the shape and size of the object based on color* (App. Br. 8 and 9).
2. Rangan does not *automatically associate a color with an object* (App. Br. 8).
3. Rangan does not require *a color signature that is representative of a continuous color pattern* (App. Br. 8).
4. Rangan does not *automatically associate an object with its color in a plurality of video frames* (App. Br. 9).
5. Rangan does not teach *simply* associating an event with a *mathematical* color *property*; and *when an action by a pointing device is detected in succeeding video frame, the mathematical*

> *color property of the selected location in the succeeding video frame is determined and compared with the mathematical color value that has been associated with events; and if the mathematical color value of the selected location in the succeeding video frame matches a mathematical color value previously associated with the event, an event is initiated* (Reply Br. 6).

The alleged claim limitations and combination of claim limitations set forth in italics above are not present in claim 31 or other claims on appeal. Therefore, the alleged limitations cannot distinguish the claimed invention from the prior art, and Appellants cannot establish error in the Examiner's rejections based thereon.

In addition, Appellants argue that Rangan tracks a rectangular wire frame, having a fixed size around the location where the pointing device was exercised by comparing the color of individual pixels in the fixed wire frame from one frame to the next (Reply Br. 5 and 6), which allegedly is different from the claims on appeal. However, we find no patentable distinction between tracking a location or rectangle wire frame as taught by Rangan and the invention claimed on appeal. In fact, Appellants state that the invention claimed on appeal determines an item of interest in an initial frame, and then automatically locates the selected item based on the color characteristics in the remaining frames (FF 1 and 2). Appellants' own disclosure states that "an invisible wire frame is created to describe the shape of the given colored object to associate with the event. But the value of the pixels defines the wire frame rather than actually drawing a wire frame on the screen" (Spec.

24 and 25). Thus, Appellants' argument is without merit since the same wire frame is used in the described invention.

Appellants argue Rangan discloses or requires procedures in addition to those claimed on appeal, namely, a relatively computative intensive method (Reply Br. 5.) However, the claims on appeal by the use of the open-ended transitional phrase "comprising" do not exclude additional procedures or distinguish from the use of additional procedures in the prior art. *Mars, Inc.,* 377 F.3d at 1376.

Finally, Appellants argue that Rangan teaches away from the invention as it teaches the use of hyperlinks, which are based upon location and not color value (Reply Br. 5 and 6). We do not believe that this argument establishes Examiner error due in part to the fact that such limitations do not appear in the claims on appeal. We note that Appellants' Specification describes that the invention claimed on appeal can be linked to an event, such as a URL (FF 1).

For the foregoing reasons, Appellants have not shown Examiner error in the rejection of independent claim 31 over Rangan. Accordingly, we affirm the 35 U.S.C. § 102 rejection of claim 31, as well as claims 32 to 36 that fall therewith because of the lack of arguments directed thereto.

Obviousness

The Examiner cited Isadore-Barreca as teaching the limitations concerning "determining the coordinates along one edge of an object..." as required in claim 37 on appeal. Appellants do not challenge that Isadore-Barreca teaches this limitation in claim 37 on appeal (App. Br. 9 and 10). Instead, Appellants argue that the Examiner does not provide a reason to combine Rangan and Isadore-Barreca (Reply Br. 4 and 6). We do not agree.

The Examiner provides many reasons for combining these teachings. These include the fact that both Rangan and Isadore-Barreca share similar technological environments corresponding to the processing of moving video images and tracking moving entities in a video presentation (FF 8 and 9, Fin. Rej. 9 to 13). Further, Isadore-Barreca identifies and traces an object within a video image (FF 8 and 9, F. Rej. 9 to 13). Accordingly, one of ordinary skill in the art would have found it obvious combine the teachings of Rangan and Isadore-Barreca.

For the foregoing reasons, Appellants have not shown Examiner error in the rejection of independent claim 37 over Rangan and Isadore-Barreca. Accordingly, we affirm the 35 U.S.C. § 103(a) rejection of claim 37, as well as claim 38 that falls therewith for lack of arguments directed thereto.

CONCLUSIONS

Appellants have not shown that the Examiner erred by failing to establish that all limitations in claims 31 to 36 on appeal are shown in Rangan within the meaning of 35 U.S.C. § 102.

Appellants have not shown that the Examiner erred by failing to establish that all limitations in claims 37 and 38 on appeal are shown within the combined teaching of Rangan and Isadore-Barreca within the meaning of 35 U.S.C. § 103(a).

Appellants have not shown that the Examiner erred by failing to provide a sufficient reason to combine the teachings of Rangan and Isadore-Barreca within the meaning of 35 U.S.C. § 103(a).

ORDER

The Examiner's rejection of claims 31 to 36 under 35 U.S.C. § 102 as being anticipated by Rangan is affirmed.

The Examiner's rejection of claims 37 and 38 under 35 U.S.C. § 103(a) as being unpatentable over Rangan and Isadore-Barreca is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

ELD

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